Notice to End Users

This User's Guide & Technical Reference is for assisting system manufacturers and end users in setting up and installing the mainboard.

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SL-63A/A1 SERIALS

SOLTEK®

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Chapter 1
Introduction

Features

CPU

1. Supports Intel **PPGA Celeron 370 CPU** and other compatible CPUs using Socket 370 at 300A ~ 533 MHz
2. Supports CPU voltage auto detect circuit
3. Supports 66/100/112 MHz Bus Clock.

Chipset

1. Intel 82440ZX chipset
2. PCI Rev 2.1, 5V, 33MHz interface compliant
3. Supports 66/68/75/83 MHz, 3.3V AGP(Accelerated Graphics Port) slot

L2 Cache

1. PPGA Celeron 370 CPU supports 128K write back cache with Pipelined Burst SRAMs

Main Memory

1. Memory range from 8MB (minimum) to 256MB (SDRAM) (maximum) with DRAM Table Free configurations
2. Supports 8/16/32/64/128MB SDRAM with 10ns or faster modules
3. Supports 2 pcs 168pin DIMM sockets (3.3V Unbuffered, 4 clock type)
4. DRAM supports ECC or Parity function

BIOS

1. AWARD Plug and Play BIOS
2. Supports ACPI Function
3. Flash Memory for easy upgrade

Super I/O Function

1. Integrated USB (Universal Serial Bus) controller with two USB ports.
2. Supports 2 IDE channels with 4IDE devices (including ZIP/LS-120 devices)
3. Provides PCI IDE Bus Master function and supports Ultra DMA33 function
4. One floppy port
5. Two high speed 16550 FIFO UART ports
6. One parallel port with EPP/ECP/SPP capabilities
7. PS/2 mouse connector
8. Built-in RTC, CMOS, keyboard controller on single I/O chip
9. Peripherals boot function (with ATX power)

Other Functions

1. AT size 22cm x 24cm
2. 4 PCI Master slots, 2 ISA slots, and 1 AGP slot
3. Supports SCSI/CD-ROM Boot function
4. Supports 66/68/75/83/100/103/105/110/112/115/124/133/140 MHz Bus Clock*
5. Supports Wake On Lan (WOL), modem ring up function **
6. Supports hardware monitor function (optional).

: For 100MHz CPU environment, the SDRAM specification must be compliant with PC-100 Spec.
*****: For WOL support WOL, the ATX power supply has to have at least 5V/720mA standby current.***

Mainboard Layout with Default Settings

The default settings of the following figure is for the PPGA Celeron 370- 300A MHz with the Jumperless function Enabled.

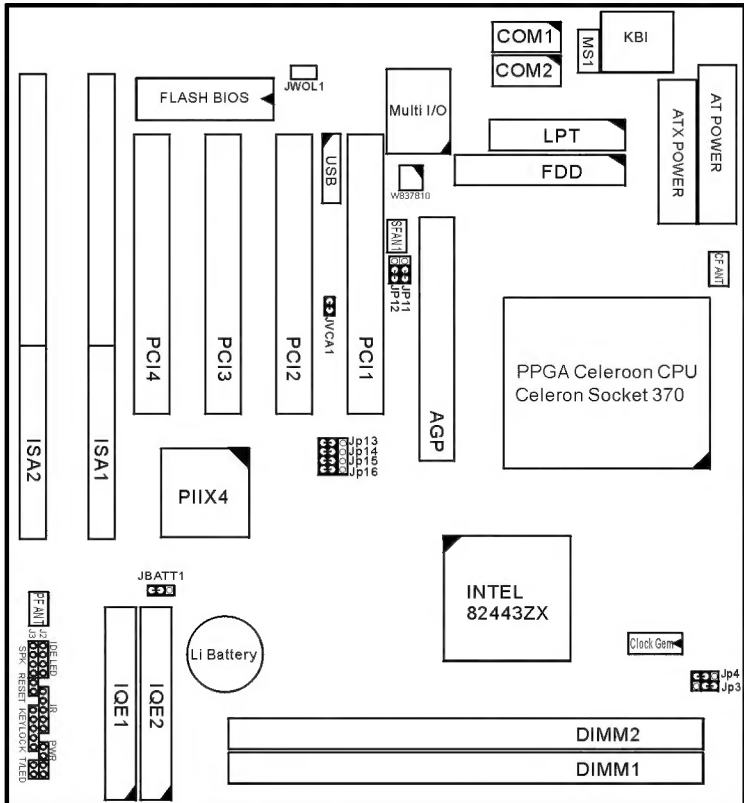



Figure 1-1. Motherboard Layout

Chapter 2
Hardware Setup

There are two ways to set the CPU type and both ways are controlled by JP13, JP14, JP15, and JP16:

1. Use jumpers (hardware): JP13 ~ JP16 must be set. Refer to the following pages (page 4~6).
2. Use BIOS (jumperless): JP13 ~ JP16 must be all closed at pin 1-2 (default). Refer to BIOS "CPU CHIPSET FEATURE SETUP"section for a detailed description.

CPU Type Jumper Configuration

CPU 4.5X Clock Setting

PPGA Celeron 370-300A/66MHz

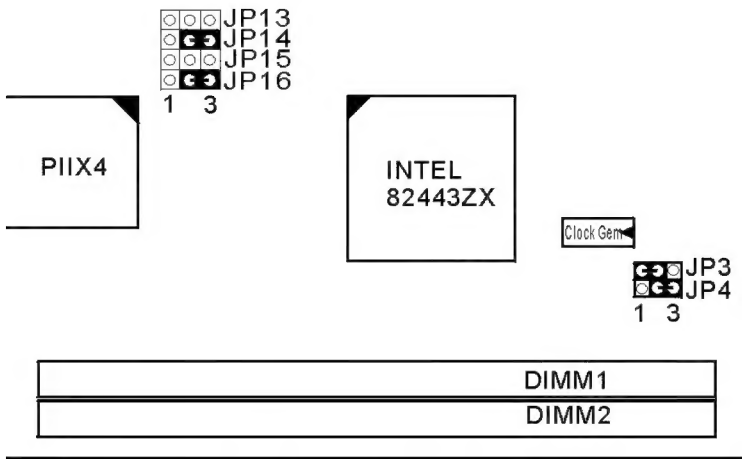



Figure 2-1. CPU Type Configuration

CPU 5.0X Clock Setting

PPGA Celeron 370-333/66 MHz

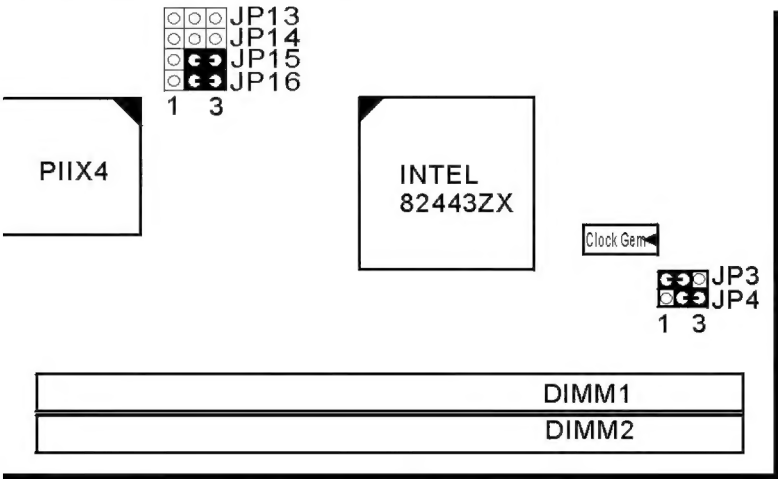



Figure 2-2. CPU Type Configuration

CPU 5.5X Clock Setting

PPGA Celeron 370–366/66 MHz

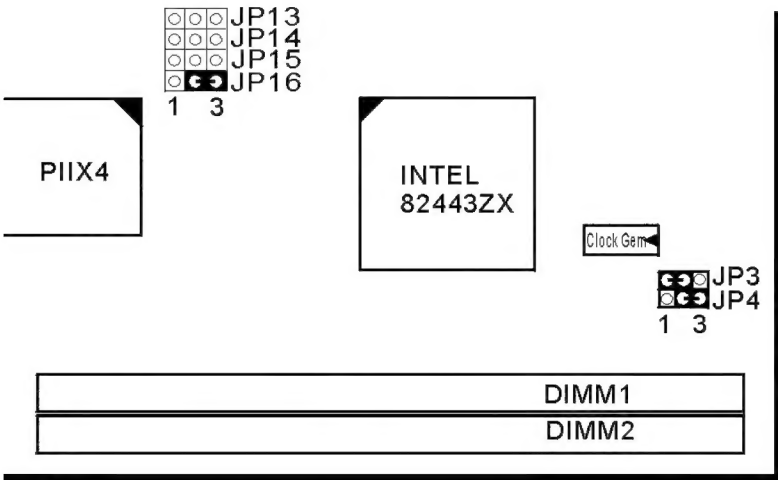



Figure 2-3. CPU Type Configuration

CPU 6.0X Clock Setting

PPGA Celeron 370-400/66 MHz

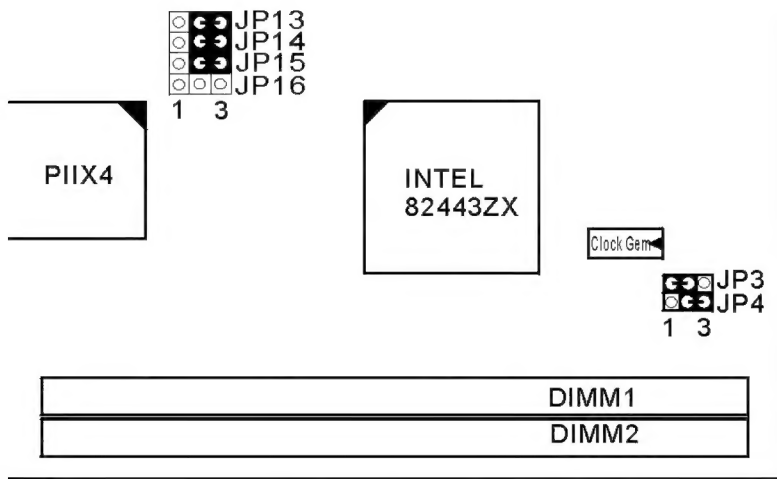



Figure 2-4 CPU Type Configuration

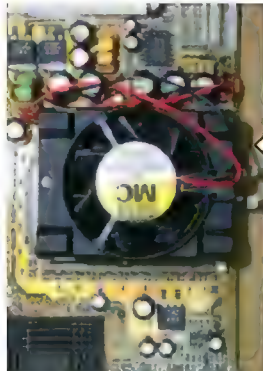
System Memory Configuration

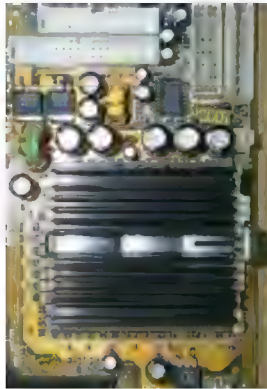
This 82440ZX motherboard supports 168 pin DIMM of 4MB, 8MB, 16MB, 32MB, 64MB and 128MB to form a memory size between 8MB to 256MB (SDRAM). 82440ZX chipsets provide "Table- Free" function. It means that users can install DRAM with any configuration and in any bank, which is why the DRAM table is not needed, but do remember that the DRAM must be 3.3V Unbuffered and 4 clock type.

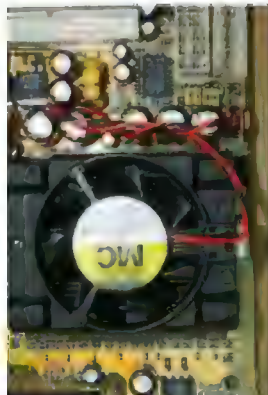
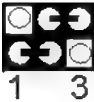
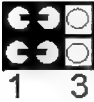
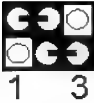
CPU Heat Sink Installation

Follow the following steps in order to install your Intel PPGA Celeron 370 properly.

Step 1:

If you use INTEL BOX TYPE Celeron 370CPU and the clip block the case hen you must change the clip with the one that we send you within the mainboard

Step 2:

Remove the fan and change the clip with the one that we send you when you finish changing the clip it should be as following photo.

Step 3:

Put the fan back on the heat sink firmly

Jumper Settings

XFAN 1: Onboard FAN (12V) Connector

XFAN1 Function

XFAN	Function
CFAN1	CPU FAN
PFAN1	Power FAN
SFAN1	Chassis FAN

JP3, JP4: Bus Clock Select

Bus Clock	JP3, JP4
66MHz	JP3 JP4 1 3
100MHz	JP3 JP4 1 3
Auto detect 66/100MHz (default)	JP3 JP4 1 3

JP13 ~ JP16: Bus Ratio Select

Bus Ratio	JP13~JP16	Bus Ratio	JP13~JP16	Bus Ratio	JP13~JP16	Bus Ratio	JP13~JP16
2.0X	JP13 JP14 JP15 JP16 1 3	4.0X	JP13 JP14 JP15 JP16 1 3	6.0X	JP13 JP14 JP15 JP16 1 3	By BIOS (default)	JP13 JP14 JP15 JP16 1 3
2.5X	JP13 JP14 JP15 JP16 1 3	4.5X	JP13 JP14 JP15 JP16 1 3	6.5X	JP13 JP14 JP15 JP16 1 3		
3.0X	JP13 JP14 JP15 JP16 1 3	5.0X	JP13 JP14 JP15 JP16 1 3	7.0X	JP13 JP14 JP15 JP16 1 3		
3.5X	JP13 JP14 JP15 JP16 1 3	5.5X	JP13 JP14 JP15 JP16 1 3	7.5X	JP13 JP14 JP15 JP16 1 3		

JP11, JP12: USB Port Select

USB Port	JP11,JP12
Redirect all USB ports To USB connector	3 1 JP12 JP11
Redirect all USB ports To AGP (default)	3 1 JP12 JP11

JVGA1: VGA Card

	JVGA1
For Special VGA Card*	
Normal (default)	

Note: This jumper is set for the special VGA card. Open this jumper when the system isn't able to boot

JBAT1: Clear CMOS Data

Clear the CMOS memory by shorting this jumper momentarily; then remove the cap to retain new settings.

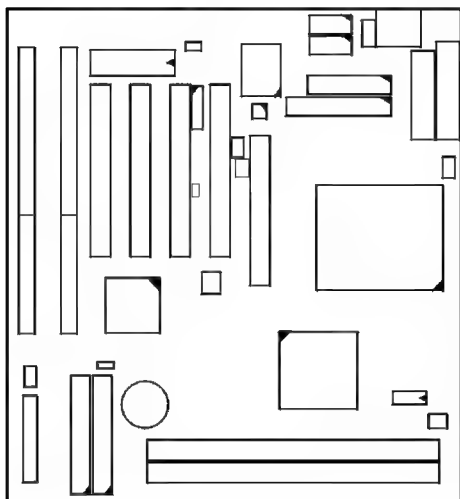
CMOS Data	JBAT1
Clear Data	1 3
Retain Data (default)	1 3

Connectors

KB1: Keyboard Connector

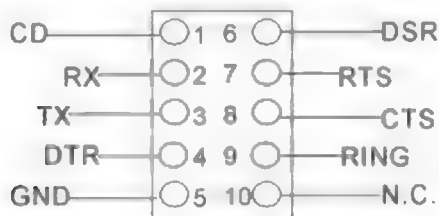
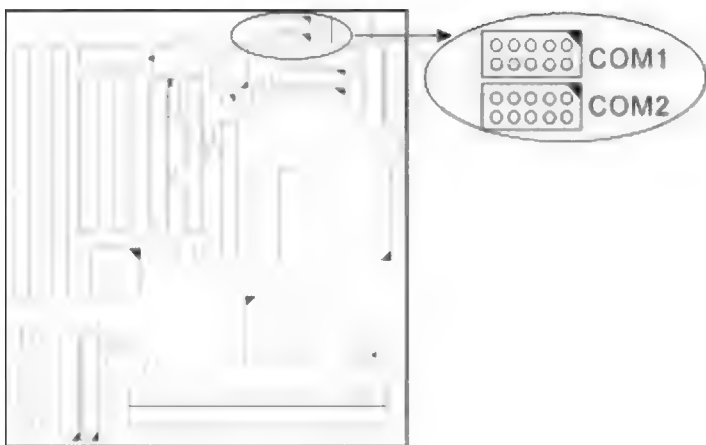
A 5-pin female DIN keyboard connector is located at the upper right corner of the motherboard. Plug the keyboard jack directly to this connector.

MS1:PS/2 Mouse Connector

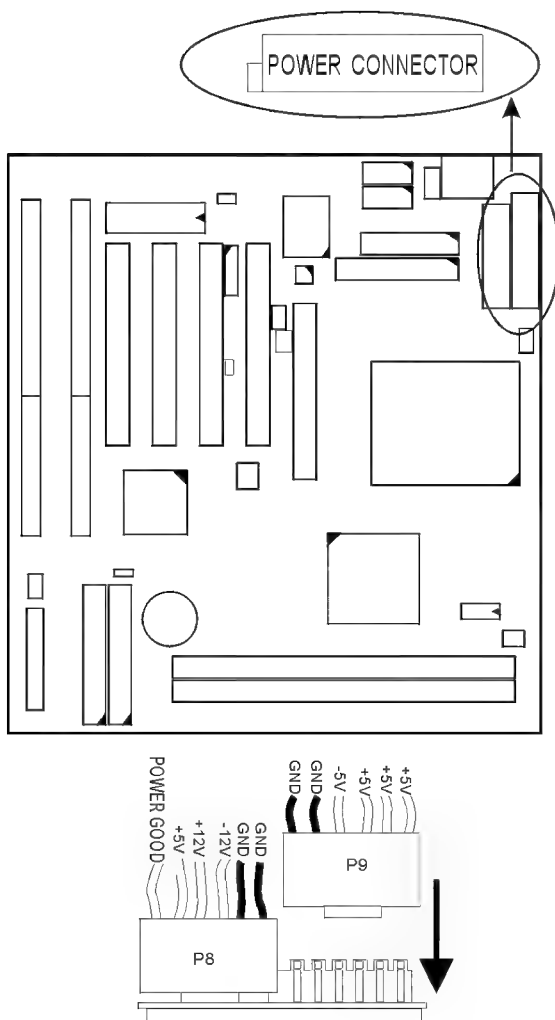
Attach PS/2 mouse cable to this 6-pin connector.

LPT:Parallel Port

The system provides a 2x13-pin parallel port connector, PRT. Attach parallel port cable to this connector.

COM1/COM2: Serial Port Connectors

The system provides has two 2x5-pin serial port connectors, COM1 and COM2. Attach COM1/COM2 cables to these connectors.

COM1/2 (Top View)

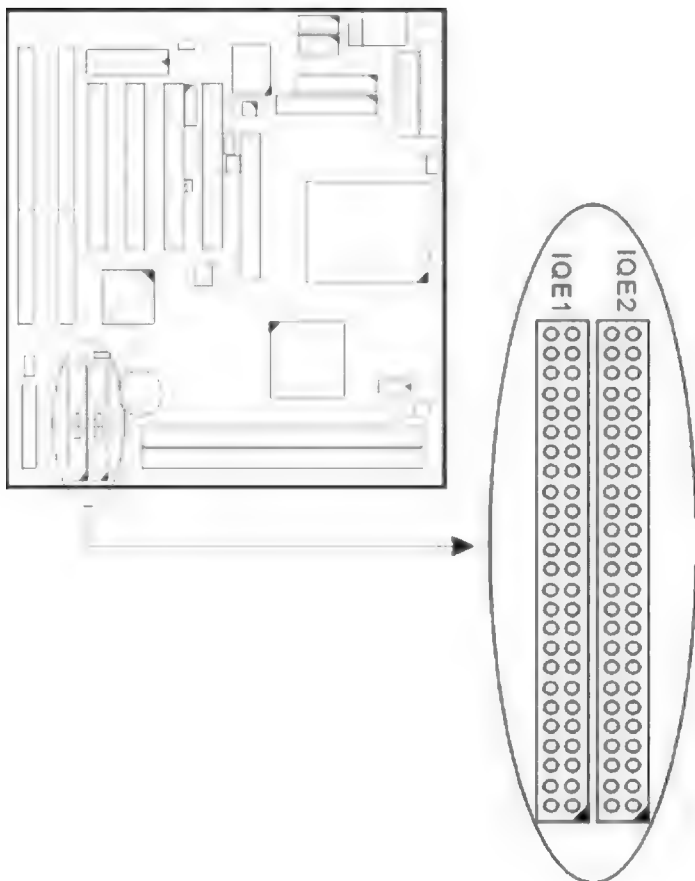
Power Connector

The power connector has two types: AT and ATX
Plug the AT dual connectors from the power directly onto the board connector while making sure the black leads are in the center.

AT POWER CONNECTOR

FDC:Floppy Drive CONNECTOR

The system board has a 2x17-pin floppy drive connector, FDC. Connect one end of a floppy drive cable to this connector and the other end to a floppy drive.

IDE1/IDE2: Primary/Secondary IDE Connectors

The system board has a 32-bit ENHANCED PCI IDE Controller that provides for HDD connectors, IDE1 (primary) and IDE2 (secondary).

IDE LED Activity Light: (J2 pin1-4)

This connector connects to the hard disk activity indicator light on the case.

Infrared Port Module Connector (J2 pin6-10)

The system board provides a 5-pin infrared connector-R1 for an optional wireless transmitting and receiving module. Pin 6 through 10 are Transmit, GND, Receive (low speed), Receive (high speed), and Vcc, respectively.

J2 pin12, 13: PWR Switch

Power Switch: Toggle this pin to turn the power supply on/off (for ATX power only).

SLEEP Switch (J2 pin14, 15)

Toggle this jumper forces the system to sleep. The system won't wake up until the hardware event is coming. (The BIOS Power Management setting must be Enabled.)

Speaker Connector (J3 pin1-4)

The speaker connector is a 4-pin connector for connecting the system to the case. (See the following drawing for jumper position.)

Reset Switch (J3 pin5, 6)

The system board has a 2-pin connector for rebooting your computer without having to turn off your power switch. This prolongs the life of the system's power supply.

JWOL1: Wake On Lan (WOL) Connector

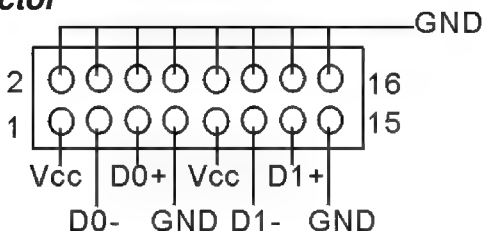
This connector is designed to use Lan to boot up the system. Connect the wake on signal from the Lan card to this connector.

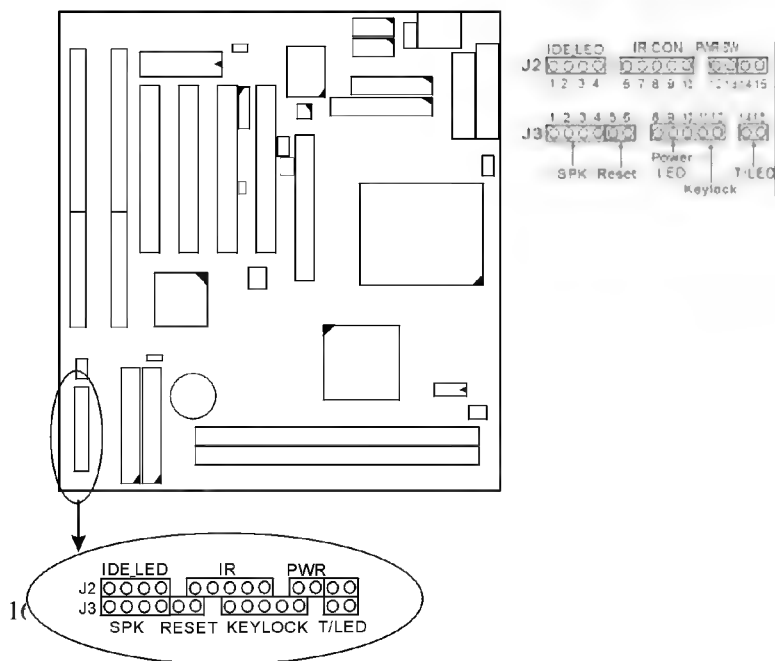
J1: SB Link

This connector is designed for the Sound Blaster PCI sound card. (optional) This will allow usage of your PCI sound card under an MS-DOS environment.

Power LED and Keylock Switch (J3 pin8-2)

The keylock switch is a 5-pin connector for locking the keyboard for security purposes. (See the following drawing for jumper position, and pin1~3 is connected to the power LED and pin 4~5 is connected to the keylock switch.)

USB1: USB Connector

Turbo LED (J2 pin14, 15)

Connect the case's turbo LED to this connector.

J2 Switch Signal Summary

J2	Pin	Signal Description
HDD LED Connector	1	+5V
	2	HDD LED Signal
	3	HDD LED Signal
	4	+5V
N.C.	5	No Connection
Infrared Connector	6	Infrared Transmit Signal
	7	GND
	8	Infrared Receive Signal (low speed)
	9	Infrared Receive Signal (high speed)
	10	+5V
N.C.	11	No Connection
PWR	12	CND
	13	Power Switch(for ATX Power)
SLEEP	14	GND
	15	Sleep Signal

J3 Switch Signal Summary

J3	Pin	Signal Description
Speaker Connector	1	Speaker Signal
	2	No Connection
	3	Ground
	4	+5V
Reset Switch	5	Reset Signal
	6	Ground
N.C.	7	No Connection
Power LED Connector	8	+5V
	9	No Connection
	10	Ground
Keylock Connector	11	Keylock Signal
	12	GND
N.C.	13	No Connection
Turbo LED Connector	14	Turbo LED Connector
	15	Ground

Chapter 3
Award BIOS Setup

This 82440ZX motherboard comes with the AWARD BIOS from AWARD Software Inc. Enter the Award BIOS program Main Menu by:

1. Turn on or reboot the system.
   After a series of diagnostic checks, the following message will appear:

   PRESS <DEL> TO ENTER SETUP

2. Press the <DEL> key and the main program screen will appear as follows.

```
                         ROM PCI/ISA BIOS
                        CMOS SETUP UTILITY
                       AWARD SOFTWARE, INC.

  STANDARD CMOS SETUP              INTEGRATED PERIPHERALS
  BIOS FEATURES SETUP              SUPERVISOR PASSWORD
  CHIPSET FEATURES SETUP           USER PASSWORD
  POWER MANAGEMENT SETUP           IDE HDD AUTO DETECTION
  PNP/PCI CONFIGURATION            HDD LOW LEVEL FORMAT
  LOAD SETUP DEFAULTS              SAVE & EXIT SETUP
                                   EXIT WITHOUT SAVING

Esc : Quit                          ° Ù ƒ  ° ^ :Select Item
F10 : Save & Exit Setup             (Shift) F2 : Change Color

                   Time, Date,Hard Disk Type...
```

3. Using the arrows on your keyboard, select an option, and press <Enter>. Modify the system parameters to reflect the options installed in your system.
4. You may return to the Main Menu anytime by pressing <ESC> .
5. In the Main Menu, "SAVE AND EXIT SETUP" saves your changes and reboots the system, and "EXIT WITHOUT SAVING" ignores your changes and exits the program.

Standard CMOS Setup

Standard CMOS Setup allows you to record some basic system hardware configuration and set the system clock and error handling. You only need to modify the configuration values of this option when you change your system hardware configuration or the configuration stored in the CMOS memory gets lost or damaged.

Run the Standard CMOS Setup as follows:

1. Choose "STANDARD CMOS SETUP" from the Main Menu and a screen with a list of options will appear.

```
                              ROM PCI/ISA BIOS
                             STANDARD CMOS SETUP
                            AWARD SOFTWARE, INC.
Date (mm:dd:yy) : Thu, May 9 1996
Time (hh:mm:ss) : 15 : 45 : 10

HARD DISKS        TYPE     SIZE  CYLS HEAD PRECOMP LANDZ SECTOR MODE
Primary Master   : Auto     0     0    0      0      0      0   Auto
Primary Slave    : Auto     0     0    0      0      0      0   Auto
Secondary Master : Auto     0     0    0      0      0      0   Auto
Secondary Slave  : Auto     0     0    0      0      0      0   Auto

Drive A: 1.44M, 3.5 in.
Drive B: None                                Base Memory:     640K
                                         Extended  Memory:  15360K
                                             Other Memory:     384K
Video : EGA/VGA                           ----------------------------
Halt On : All Errors                         Total Memory: 16384K

Esc : Quit            ↑ ↓ → ↵ @ Select Item      PU/PD/+/- : Modify
F1  : Help              (Shift) F2 : Change Color
```

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/ – keys.

A short description of the screen options is as follows:

Date (mm:dd:yy) **Time (hh:mm:ss)**	Set the current date and time.
Primary **(Secondary)** **Master/Slave**	This field records the specifications for all non-SCSI hard disk drives installed in your system. Refer to the respective documentation on how to install the drives.
Drive A/B	Set this field to the type(s) of floppy disk drive(s) installed in your system. The choices are: 360KB, 5.25 in., 1.2MB, 5.25 in., 720KB, 3.5 in., 1.44M, 3.5 in. (default), 2.88MB, 3.5 in., or None
Video	Set this field to the type of video display card installed in the system. The choices are: Monochrome; Color 40x25; VGA/EGA (default); or Color 80x25
Halt On	Set this warning feature for the type of errors that will cause the system to halt. The choices are: All Errors (default); No Errors; All, But Keyboard; All, But Diskette; or All, But Disk/Key

3. Press <ESC> to return to the Main Menu when you finish setting up the “Standard CMOS Setup”

BIOS Features Setup

BIOS Features Setup allows you to improve your system performance or set up system features according to your preference.

Run the BIOS Features Setup as follows:

1. Choose “BIOS FEATURES SETUP” from the Main Menu and a screen with a list of options will appear.

```
                        ROM PCI/ISA BIOS
                      BIOS FEATURES SETUP
                     AWARD SOFTWARE, INC.
Virus Warning                : Disabled | Video BIOS Shadow     : Enabled
CPU Internal Cache           : Enabled  | C8000-CBFFF Shadow    : Disabled
External Cache               : Enabled  | CC000-CFFFF Shadow    : Disabled
CPU L2 Cache ECC Checking    : Enabled  | D0000-D3FFF Shadow    : Disabled
Quick Power on Self Test     : Ennobled | D4000-D7FFF Shadow    : Disabled
Boot Sequence                : A,C,SCSI | D8000-DBFFF Shadow    : Disabled
Swap Floppy Drive            : Disabled | DC000-DFFFF Shadow    : Disabled
Boot Up Floppy Seek          : Enabled  |
Boot Up NumLock Status       : On       |
Gate A20 Option              : Fast     |
Typematic Rate Setting       : Disabled |
Typematic Rate (Chars/Sec)   : 6        | ESC :Quit    ° Ů Ρ °  ⁝ Select Item
Typematic Delay (Msec)       : 250      | F1  :Help        PU/PD/+/-: Modify
Security Option              : Setup    | F5  :Old Values(Shift)F2 : Color
PCI/VGA Palette Snoop        : Disabled | F6  :Load BIOS Defaults
Assign IRQ For VGA           : Enabled  | F7  :Load Setup Defaults
OS Select for DRAMs>64MB     : Non-OS/2 |
Report No FDD For WIN 95     : No       |
```

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys. An explanation of the <F> keys follows:

<F1>: “Help” gives options available for each item.
Shift <F2>: Change color.

<F5>: Get the previous values. These values are the values with which the user started in the current session.

<F6>: Load all options with the BIOS default values.

<F7>: Load all options with the Setup default values.

A short description of screen options follows:

Virus Warning	Enabled: Activates automatically when the system boots up causing a warning message to appear if there is anything attempting to access the boot sector or hard disk partition table. Disabled: No warning message will appear when there is something attempting to access the boot sector or hard disk partition table ***Note: Many diagnostic (or boot manager) programs which attempt to access the boot sector table can cause the above warning message. If you will be running such a program, we recommend that you disable the virus protection first.***
CPU Internal Cache	Choose Enabled (default) or Disabled. This option allows you to enable or disable the CPU's internal cache.
External Cache	Choose Enabled (default) or Disabled. This option allows you to enable or disable the external cache memory.
Quick Power On Self Test	Choose Enabled (default) or Disabled. This option allows you to speed up the Power-On Self-Test routine.

Boot Sequence	Default is "A, C, SCSI" This option determines which drive to look at first for an operating system.
Swap Floppy Drive	Choose Enabled or Disabled (default). This option swaps floppy drive assignments when it is enabled.
Boot Up Floppy Seek	Enabled (default): During POST, BIOS checks the track number of the floppy disk drive to see whether it is 40 or 80 tracks. Disabled: During POST, BIOS will not check the track number of the floppy disk drive.
Boot Up NumLock Status	Choose On (default) or Off. This option lets user activate the NumLock function at boot-up.
Gate A20 Option	Choose Normal or Fast (default). This option allows the RAM to access the memory above 1MB by using the fast gate A20 line.
Typematic Rate Setting	Choose Enabled or Disabled (default). Enable this option to adjust the keystroke repeat rate.
Typematic Rate (Chars/Sec)	Range between 6 (default) and 30 characters per second. This option controls the speed of repeating keystrokes.
Typematic Delay (Msec)	Choose 250 (default), 500, 750, and 1000. This option sets the time interval for displaying the first and the second characters.

Security Option	Choose System or Setup (default). This option prevents unauthorized system boot-up or use of BIOS Setup.
PCI/VGA palette Snoop	Choose Enabled or Disabled (default). It determines whether or not the MPEG ISA cards can work with PCI/VGA.
Assign IRQ for VGA	Choose Enabled (default) or Disabled. Enabled: Add one IRQ to VGA controller. Disabled: Remove IRQ from VGA controller. The system will have extra IRQ for other devices but the VGA controller will still not be disabled (only IRQ will be removed.)
OS Select for DRAM > 64MB	Non-OS2 (default): For Non-OS/2 system. OS: For OS/2 system.
Report No FDD For WIN95	Yes: BIOS reports "NO FDD" to Win95. No (default): BIOS will not report "NO FDD" to Win95.
Video BIOS Shadow	Enabled (default): Map the VGA BIOS to system RAM. Disabled: Will not map the VGA BIOS to system RAM.
C8000-CBFFF to DC000-DFFF Shadow	These options are used to shadow other expansion card ROMs.

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

Chipset Features Setup

Chipset Features Setup changes the values of the chipset registers. These registers control the system options.
Run the Chipset Features Setup as follows:

1. Choose "CHIPSET FEATURES SETUP" from the Main Menu and a screen with a list of options will appear.

```
                    ROM PCI/ISA BIOS
                 CHIPSET FEATURES SETUP
                  AWARD SOFTWARE, INC.
Auto Configuration          : Enabled  | CPU Host Clock(CPU/PCI):Default
EDO DRAM Speed Selection    : 60ns     | CPU Clock Ratio        :4.5X
EDO CASx# MA Wait State     : 2        | CPU Warning Temperature:Disabled
EDO RASx# To CAS# Delay     : 2        | Current System Temp    :
SDRAM CAS latency Time      : 3        | Current CPU1 Temperature:
DRAM Data Integrity Mode    : Non-ECC  | Current CPUFAN1 Speed  :
System BIOS Cacheable       : Disabled | Current CPUFAN2 Speed  :
Video BIOS Cacheable        : Disabled | Current CPUFAN3 Speed  :
Video RAM Cacheable         : Disabled | IN0 (V)     :     IN1(V):
8 Bit I/O Recovery Time     : 1        | IN2 (V)     :     +5  V :
16 Bit I/O Recovery Time    : 1        | +12  V      :     -12 V :
Memory hole At 15M-16M      : Disabled | -5   V      :
Passive Release             : Enabled  |
Delay Transaction           : Disabled | ESC: Quit   ↑ ↓ → ←: Select Item
AGP Aperture Size (MB)      : 64       | F1 : Help       PU/PD/+/-: Modify
                                       | F5 : Old Values (Shift)F2 : Color
                                       | F6 : Load BIOS Defaults
                                       | F7 : Load Setup Defaults
```

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/ – keys.

A short description of screen options follows:

Auto Configuration Choose Enabled (default) or Disabled. The system sets all options on the left side of the screen automatically when you choose Enabled.

EDO DRAM Speed Selection Choose 50ns or 60ns (default). Do not change this setting unless you know the DRAM access time spec.

EDO CASX# MA Wait State	You could select the timing control type of EDO DRAM CAS MA (memory address bus). The choices are: 1, 2.
CPU Host Clock (CPU/PCI)	Choose 66/33,75/37,83/41MHz, or 133/33,140/35,112/37,115/38,120/40 140/35MHz,124/41,133/44MHz.
CPU Clock Ratio	Choose 2.0X, 2.5X, 3.0X, 3.5X, 4.5X, 4.0X,5.0X, 5.5X, 6.0X, 6.5X, 7.0X, 7.5X, or 8.0X.
EDO RASX# Wait State	You could select the timing control type of EDO DRAM RAS MA (memory address bus). The choice: 1, 2.
SDRAM CAS Latency Time	You can select CAS latency time in HCLKs of 2/2 or 3/3. The system board designer should have set the values in this field, depending on the DRAM installed. Do not change the values in this field unless you change specifications of the installed DRAM or the installed CPU..
DRAM Data	Choose Non-ECC (default) or ECC
Integrity Mode	Depends on the DRAM type. ECC stands for Error Check and Correct. Non-ECC: Disabled ECC check function. ECC: Enabled ECC check function.
System BIOS Cacheable	Choose Enabled or Disabled (default). When Enabled, the access to the system BIOS ROM addressed at F0000H-FFFFFH is cached.

Video BIOS Cacheable	Choose Enabled or Disabled (default). When Enabled, the access to the VGA BIOS ROM addressed at C0000H-C7FFFH is cached.
Video RAM Cacheable	Choose Enabled or Disabled (default). When Enabled, the access to the VGA RAM addressed is cached.
8 Bit I/O Recovery Time **16 Bit I/O Recovery Time**	This delay happens when the CPU is running so much faster than the I/O bus that the CPU must be delayed to allow for the completion of the I/O. The choices for 8 bit I/O are NA, 1 to 8 CPU clock. Default is 3. The choices for 16 bit I/O are NA, 1 to 4 CPU clock. Default is 2.
Memory Hole At 15M-16M	Choose Enabled or Disabled (default). In order to improve performance, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory's space below 16MB.
Passive Release	When Enabled, CPU to PCI bus accesses are allowed during passive release. Otherwise, the arbiter only accepts another PCI master access to local DRAM. The Choice: Enabled, Disabled.
Delayed Transaction	The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select Enabled to support compliance with PCI specification version 2.1. The Choice: Enabled, Disabled.

AGP Aperture Size (MB)	Choose 4 , 8, 16, 32, 64 (default), 128, or 256 MB. Memory mapped and graphics data structures can reside in a Graphics Aperture. This area is like a linear buffer. BIOS will automatically report the starting address of this buffer to the O.S.

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

Power Management Setup

Power Management Setup sets the system's power saving functions.

1. Choose "POWER MANAGEMENT SETUP" from the Main Menu and a screen with a list of options will appear.

```
                    ROM PCI/ISA BIOS
                 POWER MANAGEMENT SETUP
                  AWARD SOFTWARE, INC.
ACPI Function           : Enabled       ** Reload Global Timer Events **
Power Management        : User Define   IRQ[3-7,9-15], NMI    : Enabled
PM Control by APM       : No            Primary IDE 0         : Enabled
Video Off Method        : V/H           Primary IDE 1         : Enabled
SYNC+Blank                              Secondary IDE 0       : Enabled
Video Off After         : Standby       Secondary IDE 1       : Enabled
Modem Use IRQ           : 3             Floppy Disk           : Enabled
Doze Mode               : Disabled      Serial Port           : Enabled
Standby Mode            : Disabled      Parallel Port         : Enabled
Suspend Mode            : Disabled
HDD Power Down          : Disabled
Throttle Duty Cycle     : 62.5%
PCI/VGA Act Monitor     : Enabled
Soft-Off by PWR-BTTN    : Instant-Off   ESC : Quit   ↑ ↓ → ←: Select Item
Poweron by Ring         : Disabled      F1 : Help       PU/PD/+/- : Modify
Resume by Alarm         : Disabled      F5 : Old Values (Shift)F2 : Color
Wake Up On LAN          : Disabled      F6 : Load BIOS Defaults
IRQ 8 Break Suspend     : Disabled      F7 : Load Setup Defaults
```

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

A short description of screen options follows:

Power Management	Choose Max. Saving, User Define (default), Disabled, or Min. Saving.
PM Control by APM	Choose Yes or No (default). You need to choose Yes when the operating system has the APM functions, otherwise choose No.

Video Off Method	Choose Blank , DPMS, or V/H Sync+Blank (default). You can choose either DPMS or V/H Sync+Blank when the monitor has the Green function. You need to choose Blank when the monitor has neither the Green function.
Video Off After	Choose NA, Suspend, Standby (default), or Doze.
MODEM Use IRQ	Assign the IRQ number to the modem which is being used so that the ring signal can wakeup the system. The default setting is 3 (COM2).
Doze Mode	This mode sets the CPU speed down to 33MHz.
Standby Mode **Suspend Mode**	These two options allow you to choose the mode for the different timers. The Standby Mode turns off the VGA monitor, and the Suspend Mode turns off the CPU and saves the energy of the system.
HDD Power Down	Time is adjustable from 1 to 15 minutes. When the set time has elapsed, the BIOS sends a command to the HDD to power down, which turns off the motor.
Throttle Duty Cycle	Choose the duty cycle time: 12.5%, 25%, 37.5%, 50%, 62.5% (default), 75%,. The bigger the percentage, the more power saving.

PCI/VGA Act-Monitor	Enabled: the system can not enter the power saving mode when monitor is on. Disabled: the system can enter the power saving mode when monitor is on.
Soft-Off by PWR-BTTN	Instant-off: (default) turns off the system power at once after pushing the power button. Delay 4 Sec: turns off the system power 4 seconds after pushing the power button (to meet PC97/98 spec.)
Modem Ring Resume	An input signal on the serial Ring Indicator (RI) Line (in other words, An incoming call on the modem) Awakens the system from a soft off state
Wake On LAN	Enabled: Wake up the system from the LAN card (LAN Card must support Wake Up On LAN function And the power supply must provide at least 5V/750Ma standby current)
IRQ8 Break Suspend	You can Enable or Disable monitoring of IRQ8 so it does not awaken the system from Suspend mode. The Choice: Enabled, Disabled.

IRQ (#), NMI;	Enabled: (default) The system can not enter the power saving mode when I/O ports or IRQ # is activated
Primary IDE 0	
Primary IDE 1;	
Secondary IDE 0	
Secondary IDE 1;	Disabled: The system still can enter the power saving mode when I/O ports or IRQ# is activated.
Floppy Disk;	
Serial Port;	
Parallel Port	

Note: These functions can only be activated when the power management option is Enabled

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

PnP/PCI Configuration Setup

PnP/PCI Configuration Setup configures the PCI bus slots.

Run the Chipset Features Setup as follows:

1. Choose "PnP/PCI CONFIGURATION SETUP" from the Main Menu and a screen with a list of options will appear.

```
                         ROM PCI/ISA BIOS
                       PNP/PCI CONFIGURATION
                       AWARD SOFTWARE, INC.

PNP OS Installed        : No              Used MEM base address     : N/A
Resources Controlled By : Manual          Used MEM Length*       : 8K
Reset Configuration Data: Disabled        Assign IRQ For USB     : Enabled

IRQ-3  assigned to     : PCI/ISA PnP
IRQ-4  assigned to     : PCI/ISA PnP
IRQ-5  assigned to     : PCI/ISA PnP
IRQ-7  assigned to     : PCI/ISA PnP
IRQ-9  assigned to     : PCI/ISA PnP
IRQ-10 assigned to     : PCI/ISA PnP
IRQ-11 assigned to     : PCI/ISA PnP
IRQ-12 assigned to     : PCI/ISA PnP
IRQ-14 assigned to     : PCI/ISA PnP
IRQ-15 assigned to     : PCI/ISA PnP
DMA-0  assigned to     : PCI/ISA PnP
DMA-1  assigned to     : PCI/ISA PnP      ESC : Quit                  : Select Item
DMA-3  assigned to     : PCI/ISA PnP      F1  : Help        PU/PD/+/- : Modify
DMA-5  assigned to     : PCI/ISA PnP      F5  : Old Values  (Shift)F2 : Color
DMA-6  assigned to     : PCI/ISA PnP      F6  : Load BIOS Defaults
DMA-7  assigned to     : PCI/ISA PnP      F7  : Load Setup Defaults
```

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

A short description of screen options follows:

PNP OS Installed — Yes: OS supports Plug and Play function.
No (default): OS doesn't support Plug and Play function.

Note: BIOS will automatically disable all PnP resources except the boot device card when you select Yes on Non-PnP OS..

Resources Controlled By	Choose Manual (default) or Auto. The BIOS checks the IRQ/DMA channel number on the ISA and PCI card manually if you choose Manual and the IRQ/DMA channel number will be checked automatically if you choose Auto.
Reset Configuration Data	Choose Enabled or Disabled (default). Disabled retains PnP configuration data in BIOS and Enabled resets the PnP configuration data in the BIOS.
IRQ-x assigned to DMA-x assigned to	Legacy ISA: Manually assigns IRQ/DMA to device. PCI/ISA PnP: BIOS assigns IRQ/DMA to device automatically.
Used MEM Base Address	Choose N/A (default) or ISA legacy card to have the memory start at the address.
Used MEM Length*	Choose 8K, 16K, 32K, or 64K. With the above two functions, users can define where the used memory address is located and its corresponding length of the legacy area. BIOS will skip the UMB area which is used by the legacy device to avoid memory space conflict. * This function is active only when the "Used MEM Base Addr" is chosen.

Assign IRQ for USB	Choose Enabled (default) or Disabled. Enabled: Add one IRQ to USB controller. Disabled: Remove IRQ from USB controller. The system will have extra IRQ for other devices but the USB controller will still not be disabled (only IRQ was removed.)

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

Load Setup Defaults

Load Setup Defaults option loads the default system values to the system configuration fields. If the CMOS is corrupted the defaults are loaded automatically. Choose this option and the following message will appear:

```
"Load Setup Defaults (Y/N)? N"
```

To use the Setup defaults, change the prompt to "Y" and press <Enter>.

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

Integrated Peripherals

Integrated Peripherals option changes the values of the chipset registers. These registers control system options in the computer.

1. Choose “INTEGRATED PERIPHERALS” from the Main Menu and a screen with a list of options will appear.

```
                  ROM PCI/ISA BIOS
               INTEGRATED PERIPHERALS
                AWARD SOFTWARE, INC.

IDE HDD Block Mode          : Enabled   UART Mode Select        : IrDA
IDE Primary Master PIO      : Auto      RxD, TxD Active         : Lo, Lo
IDE Primary Slave PIO       : Auto      IR Transmission Delay   : Disabled
IDE Secondary Master PIO    : Auto      Onboard Parallel Port   : 378/IRQ7
IDE Secondary Slave PIO     : Auto      Parallel Port Mode      : ECP+EPP
IDE Primary Master UDMA     : Auto      ECP Mode Use DMA        : 3
IDE Primary Slave UDMA      : Auto      EPP Mode Select         : EPP1.7
IDE Secondary Master UDMA   : Auto
IDE Secondary Slave UDMA    : Auto
On-Chip Primary PCI IDE     : Enabled
On-Chip Secondary PCI IDE   : Enabled
USB Keyboard Support        : Disabled

KBC Input Clock             : 8 MHz
Onboard FDC Controller      : Enabled   ESC : Quit    ° Ù ƒ  °  ⁚ Select Item
Onboard Serial Port 1       : Auto      F1  : Help      PU/PD/+/- : Modify
Onboard Serial Port 2       : Auto      F5  : Old Values (Shift)F2: Color
                                        F6  : Load BIOS Defaults
                                        F7  : Load Setup Defaults
```

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/° V keys.

A short description of screen options is as follows:

IDE HDD Block Mode

Choose Enabled (default) or Disabled. If your hard disk size is larger than 540MB, choose Enabled, and, if you are using the IDE HDD Auto Detection option, the BIOS will choose this option automatically.

Note: Some older model HDDs don’t provide this feature.

IDE Primary Master/Slave PIO IDE Secondary Master/Slave PIO	Choose Auto (default) or Mode 0~4. The BIOS will detect the HDD Mode type automatically when you choose Auto. You need to set to a lower mode than Auto when your hard disk becomes unstable.
On-Chip Primary/ Secondary PCI IDE	Enabled: (default)Turn on the onboard IDE function. Disabled: Turn off the onboard IDE function.
Onboard PCI SCSI Chip	Choose Enabled or Disabled (default). Enabled: Turn on onboard SCSI controller (Adaptec 7880 Ultra Wide SCSI.) Disabled: (default) Turn off onboard SCSI controller.
USB Keyboard Support	Enabled: Enables function when the USB keyboard is being used. Disabled: (default) When the AT keyboard is being used.
KBC Input Clock	Choose 6MHz, 8MHz (default), 12MHz, or 16MHz. There may be a compatibility problem when it is set above 8MHz.
Onboard FDC Controller	Choose Enabled (default) or Disabled. Choose Disabled when you use an ISA card with FDD function, or , choose Enabled to use the onboard FDD connector.

Onboard Serial Port 1	Choose Auto (default), 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, or Disabled. Do no set port 1 & 2 to the same value, except when setting at Disabled.
Onboard Serial Port 2	Choose Auto (default), 3F8/IRQ4 , 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, or Disabled.
UART Mode select	Choose Normal (default), IrDA, or ASKIR.
IR Transmission Delay	Enabled: Enabled delay when transferring data. Disabled (default) Disabled delay when transferring data.
Onboard Parallel Port	Choose the printer I/O address: 378H/IRQ7 (default), 3BCH/IRQ7, 278H/IRQ5
Parallel Port Mode	Choose SPP (default), ECP + EPP EPP, or ECP mode. The mode depends on the external device connected to this port.
ECP Mode Use DMA	Choose DMA3 (default) or DMA1. Most sound cards use DMA1. Check with your sound card configuration to make sure that there is no conflict with this function. ***: This option will not be displayed unless the EPP/ECP function is selected..**

EPP Mode Select	Choose EPP1.7 (default) or EPP1.9. EPP1.9 supports hardware handshake. This setting is dependent upon your EPP device. ***Note: The above 2 options will not be displayed unless the EPP/ECP function is selected.***

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

Supervisor/User Password

These two options allow you to set your system passwords. Normally, the supervisor has a higher ability to change the CMOS setup option than the user. The way to set up the passwords for both Supervisor and User are as follows:

1. Choose "Change Password" in the Main Menu and press <Enter>. The following message appears:

   "Enter Password:"

2. The first time you run this option, enter your password up to 8 characters and press <Enter>. The screen does not display the entered characters.

3. After you enter the password, the following message appears prompting you to confirm the password:

   "Confirm Password:"

4. Enter the same password "exactly" as you just typed again to confirm the password and press <Enter>.

5. Move the cursor to Save & Exit Setup to save the password.

6. If you need to delete the password you entered before, choose the Supervisor Password and press <Enter>. It will delete the password that you had before.

7. Move the cursor to Save & Exit Setup to save the option you did, otherwise the old password will still be there the next time you turn your machine on.

8. Press <ESC> to exit to the Main Menu.

Note: If you forget or lose the password, the only way to access the system is to clear the CMOS RAM by setting JBAT1. All setup information will be lost and you need to run the BIOS setup program again.

IDE HDD Auto Detection

IDE HDD Auto Detection detects the parameters of an IDE hard disk drive and automatically enters them to the Standard CMOS Setup screen.

The screen will ask you to select a specific hard disk for Primary Master after you select this option. If you accept a hard disk detected by the BIOS, you can enter “Y” to confirm and then press <Enter> to check next hard disk. This function allows you to check four hard disks and you may press the <ESC> after the <Enter> to skip this function and go back to the Main Menu.

Save & Exit Setup

Save & Exit Setup allows you to save all modifications you have specified into the CMOS memory. Highlight this option on the Main Menu and the following message appears:

SAVE to CMOS and EXIT (Y/N)? Y

Press <Enter> key to save the configuration changes.

Exit Without Saving

Exit Without Saving allows you to exit the Setup utility without saving the modifications that you have specified. Highlight this option on the Main Menu and the following message appears:
Quit Without Saving (Y/N)? N

You may change the prompt to “Y” and press the <Enter> key to leave this option.